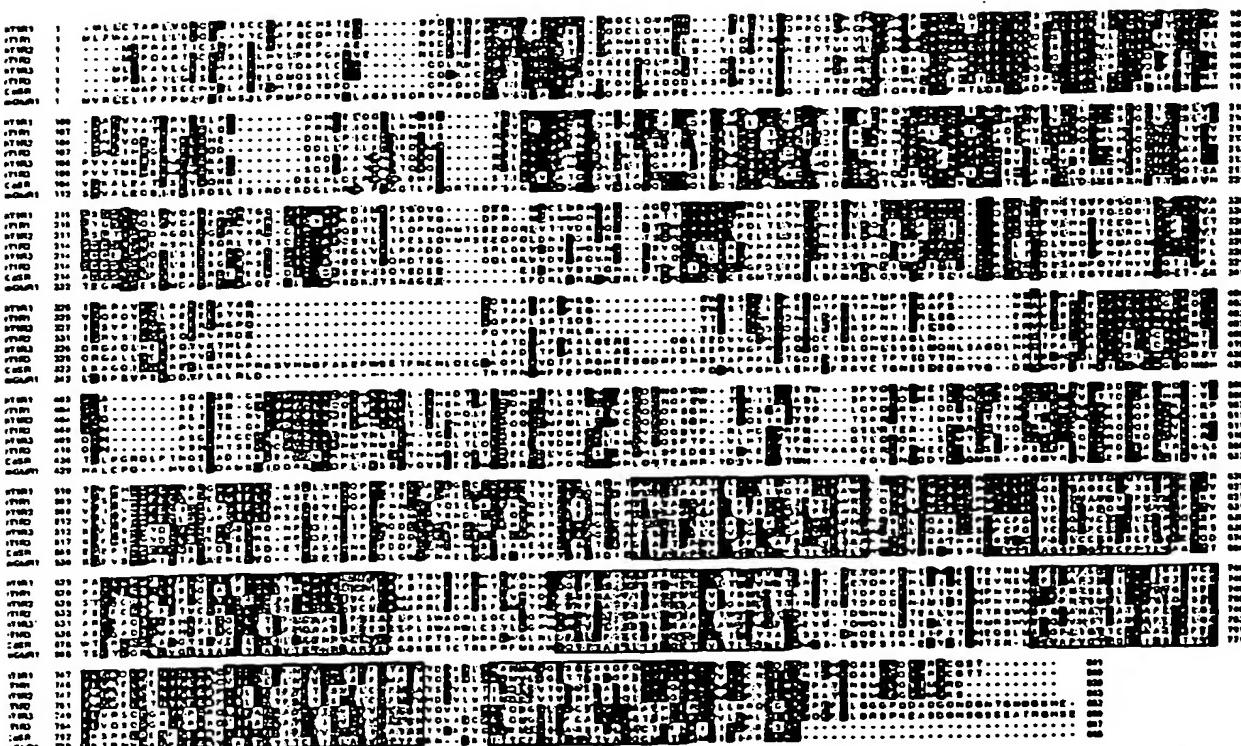


Figure 1: Catalog of human and rat T1Rs



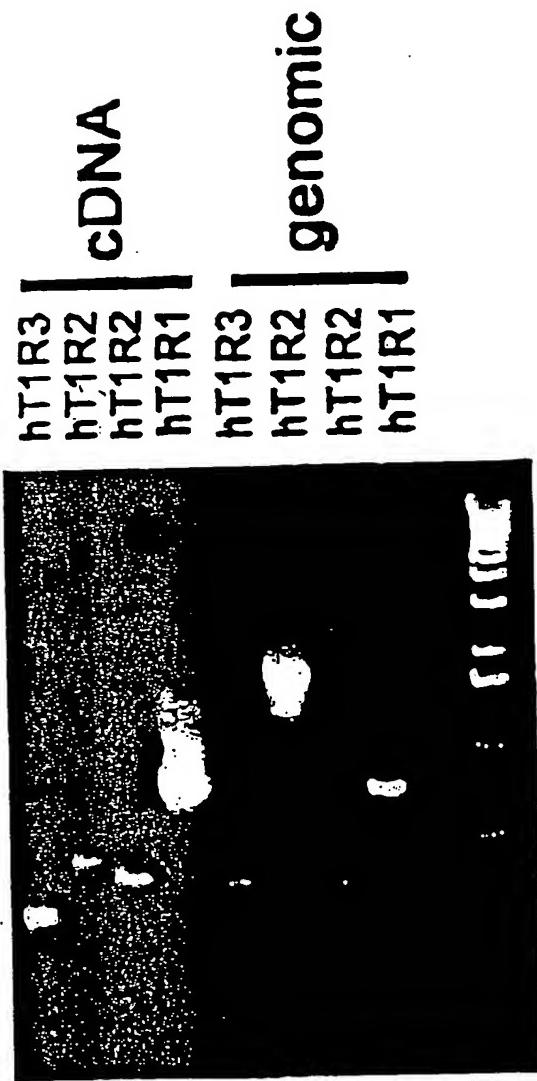


Figure 2 hT1R2 and hT1R3 are expressed in human tongue epithelium. cDNA-specific amplification products can be amplified from cDNA prepared from resected human circumvallate papillae.

Figure 3 Human T1R2/T1R3 functions as a sweet taste receptor

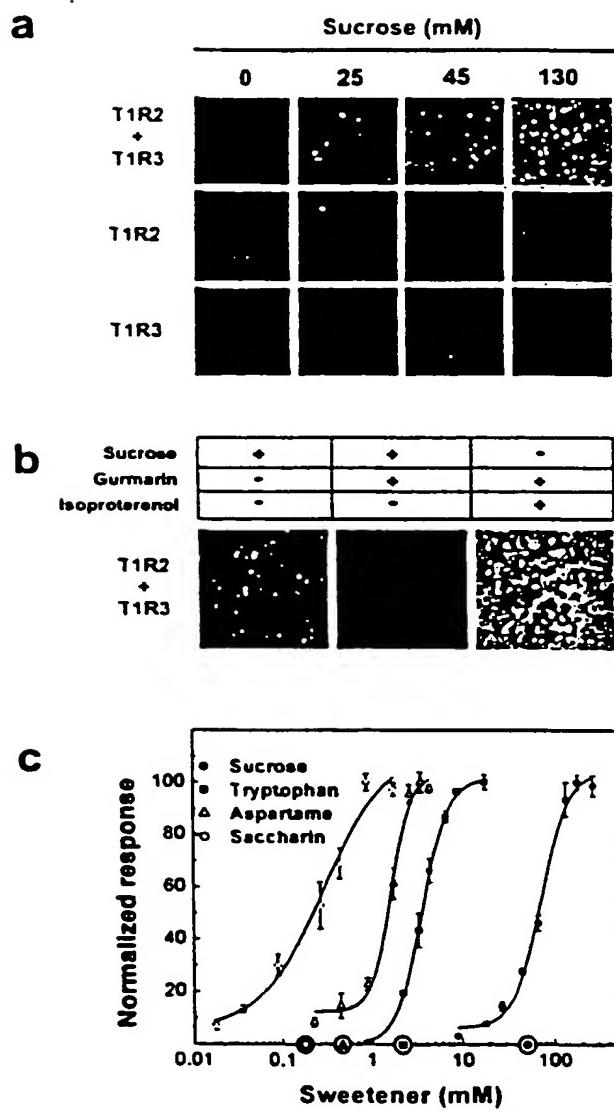
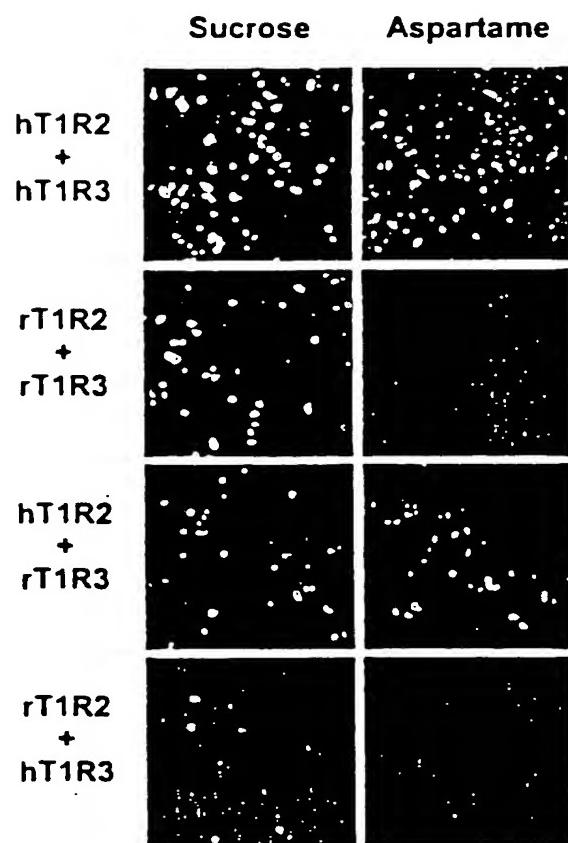


Figure 4 T1R2 may control T1R2/T1R3 ligand specificity



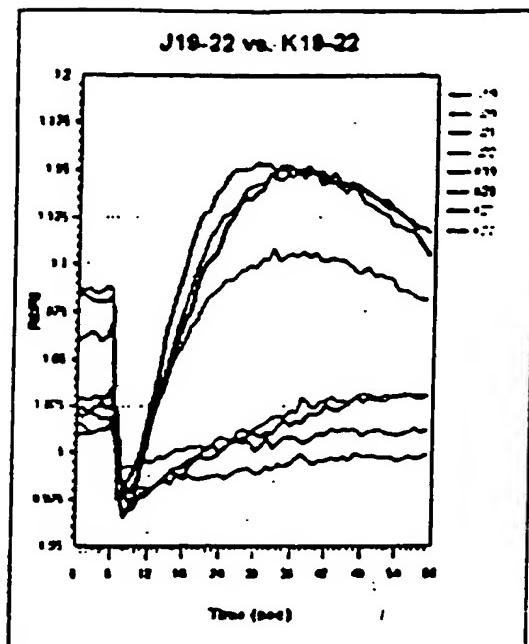


Figure 5

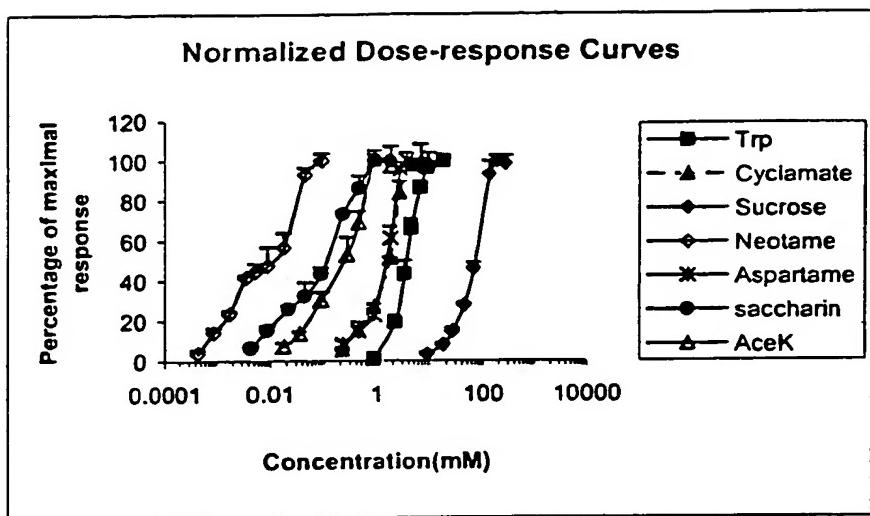


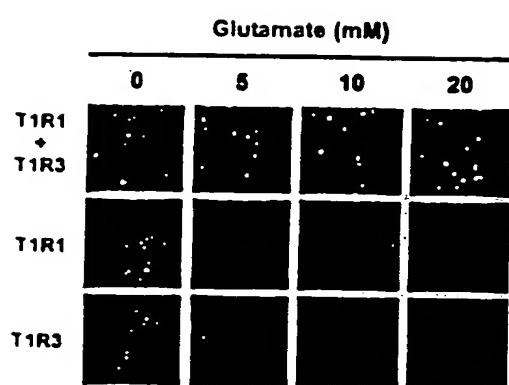
Figure 6

Figure 7 Key ligand-binding residues of mGlurR1 are conserved in T1R1

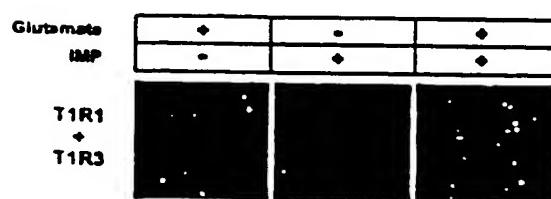


Figure 8 Human T1R1/T1R3 functions as an umami taste receptor

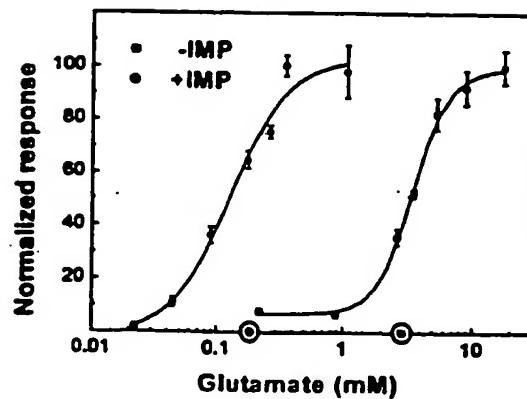
a



b



c



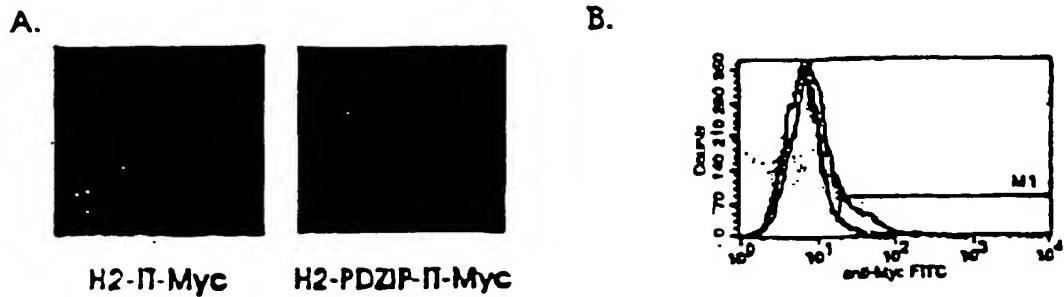


Figure 9 PDZIP facilitate the surface expression of human T1R2.

- A. Immunofluorescence staining of Myc-tagged hT1R2 indicates that PDZIP significantly increases the amount of human T1R2 protein on the plasma membrane.**
- B. FACS analysis data demonstrating the same result.**
Myc-tagged human T1R2: Green line. Myc-tagged
- C. human T1R2 with PDZIP: black line.**

Figure 10 Calcium-imaging data demonstrating hT1R2/hT1R3 responses to a number of sweet stimuli.

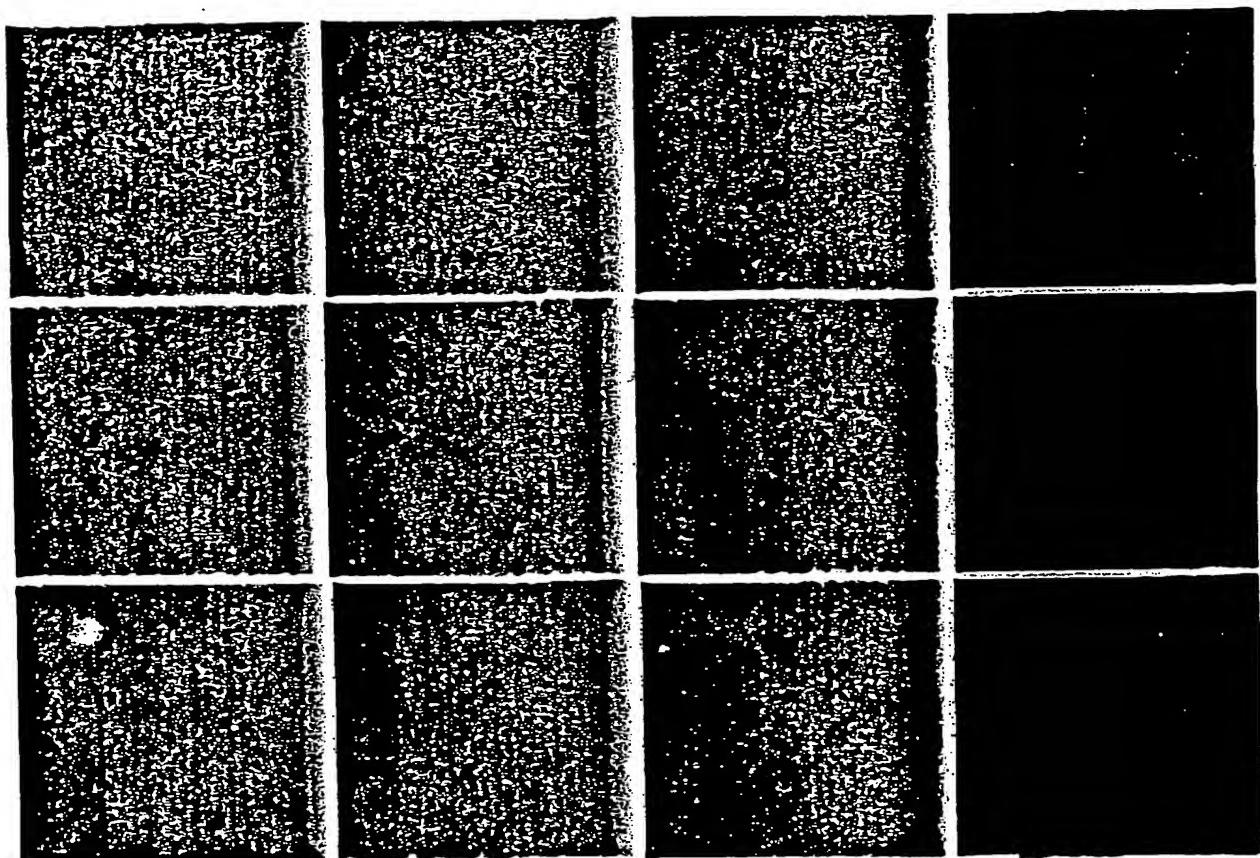


Figure 11

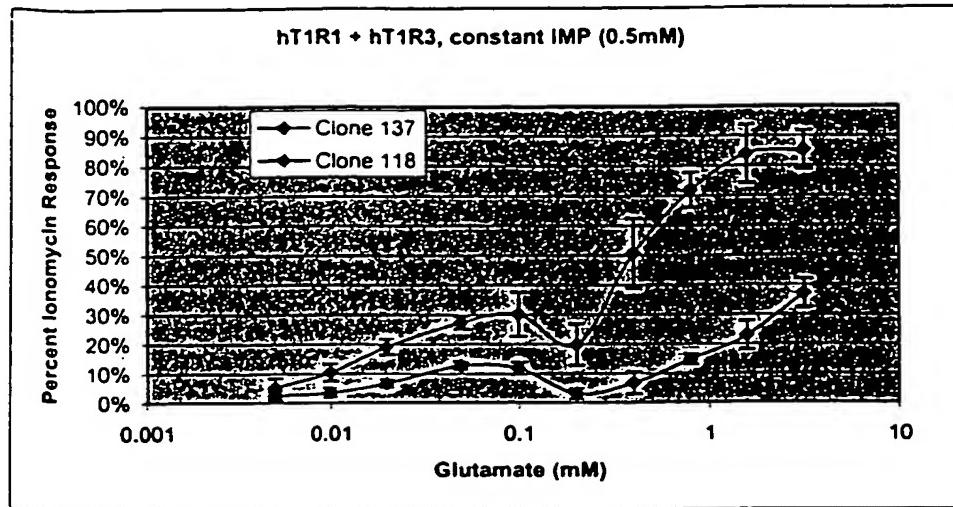


Figure 12

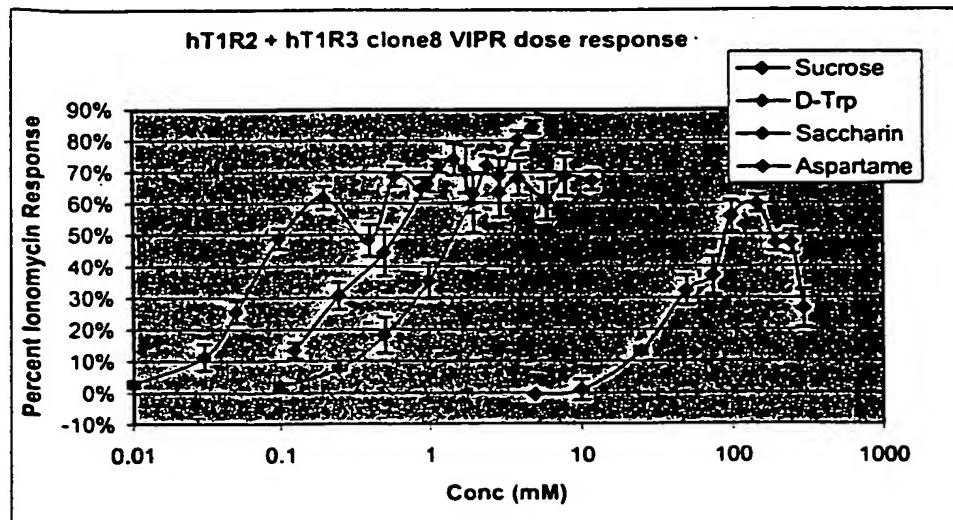
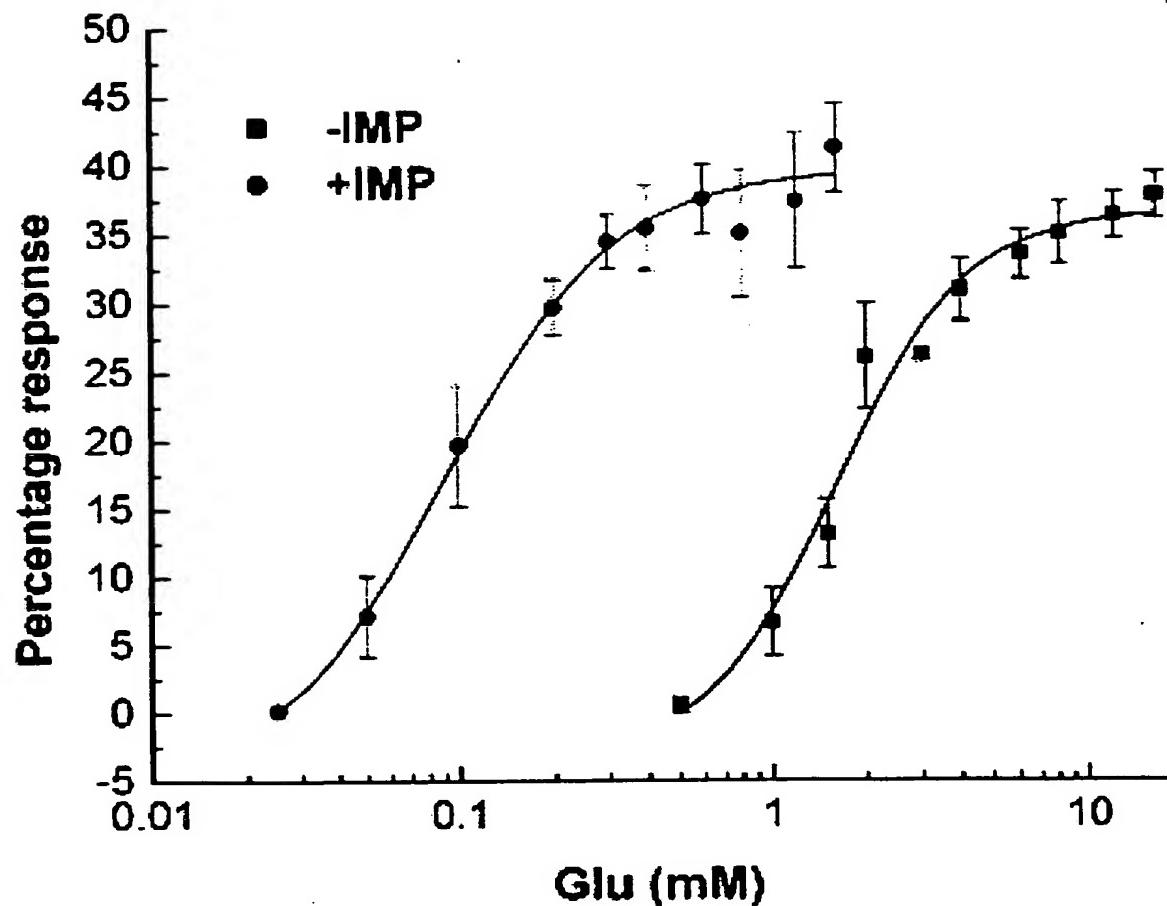


Figure 13



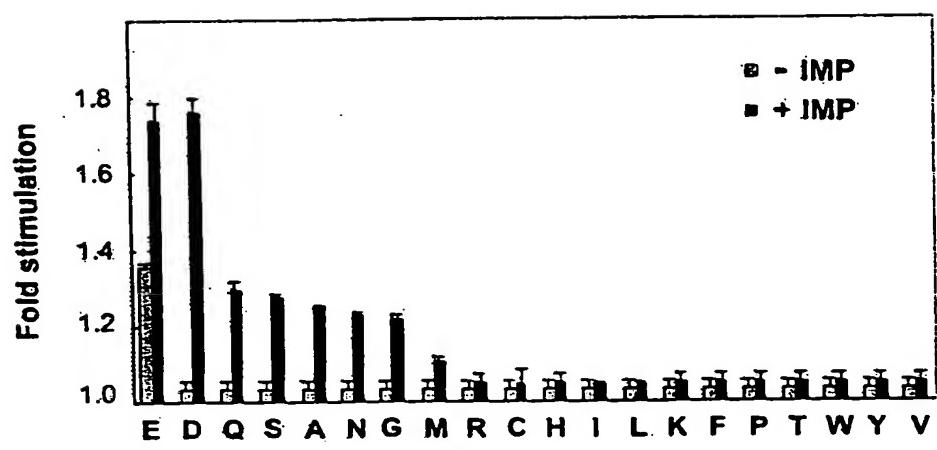


Figure 14

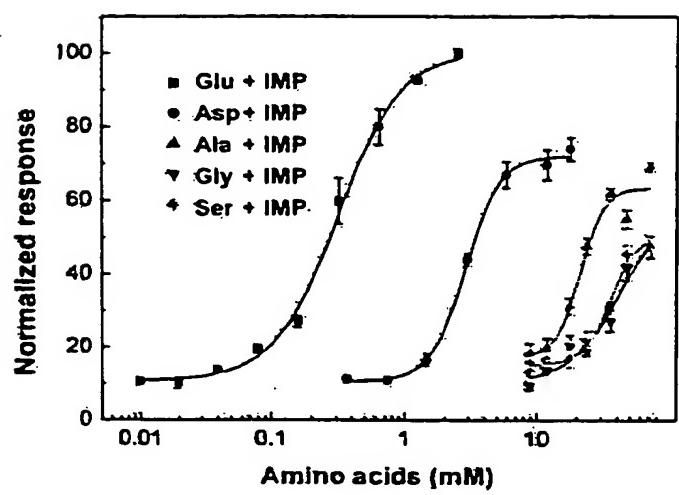


Figure 15

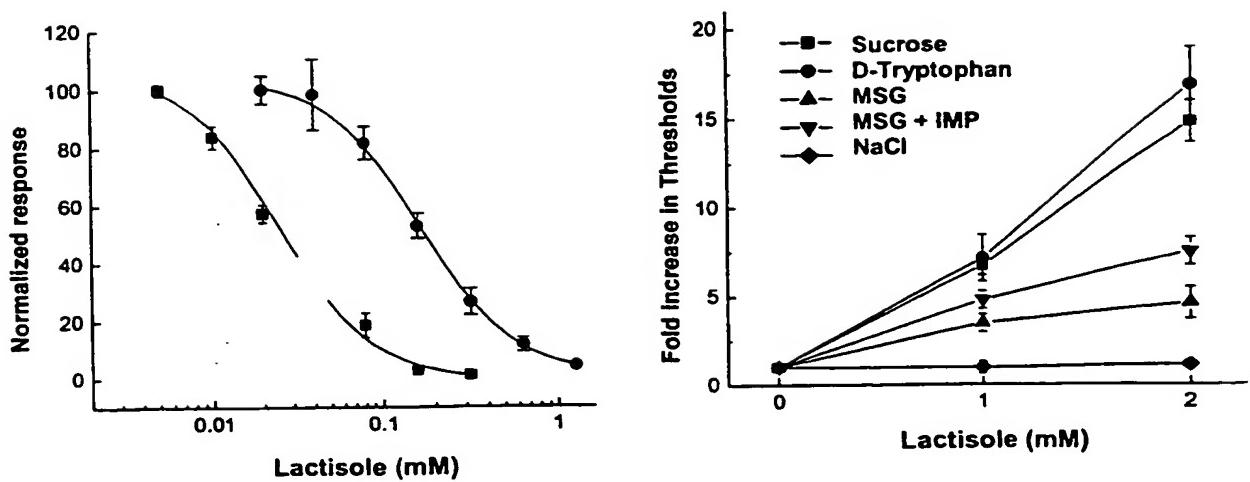


Figure 16 Lactisole inhibits the T1R2/T1R3 sweet and T1R1/T1R3 umami receptors and sweet and umami taste. (*Left panel*) responses of HEK-G_{a15} cells transiently transfected with T1R1/T1R3 (circles) to 10 mM L-glutamate and HEK-G_{a15} cells transiently transfected with T1R2/T1R3 (squares) to 150 mM sucrose in the presence of variable concentrations of lactisole are shown. (*Right panel*) fold increases in taste detection thresholds in the presence of 1 and 2 mM lactisole are shown for the sweet taste stimuli sucrose and D-tryptophan, the umami taste stimuli L-glutamate (MSG) and L-glutamate plus 0.2 mM IMP, and sodium chloride. Detection thresholds were determined following the method of Schiffman et al.